ORIGINAL

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF TEXAS
FORT WORTH DIVISION

HENRY LEE SIMS, JR., et al.,

Plaintiffs,

vs.

KIA MOTORS AMERICA, INC. and
KIA MOTORS CORPORATION,

Defendants.

Case No. 4:14-cv-00045-A

PLAINTIFFS' OPPOSITION AND BRIEF IN SUPPORT TO DEFENDANTS' MOTION TO LIMIT THE TESTIMONY OF MICHAEL MCCORT

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Page(s)

CASES

I. INTRODUCTION

After engineer Michael McCort reconstructed the Kia Soul accident using industry-standard methods and materials, he reached several conclusions. Among them is his opinion that the Soul's fuel tank moved downward before hitting the object that ruptured it.

In its Motion, Kia doesn't challenge McCort's qualifications to testify as an expert in the field of accident reconstruction, or any of his numerous opinions about the accident – except for his conclusion about the movement of the fuel tank.

The Court should reject Kia's request to allow McCort to testify about everything except the fuel tank's movement because McCort reached this conclusion after reliably applying generally-accepted methodology used routinely in reconstructing automobile accidents. And instead of showing this Court even one specific example of McCort using a flawed or unaccepted methodology in his analysis, Kia merely quibbles with the merits of his conclusion about the fuel tank, which should be left for the jury to evaluate. Kia's Motion should therefore be denied.

II. MCCORT'S RECONSTRUCTION OF THE ACCIDENT

McCort is a professional engineer who is licensed and certified in multiple states, and who has lectured at universities and engineering forums on various aspects of accident reconstruction. Exhibit A, App. at p. 1 (McCort Dec. ¶ 2-3). He is thus familiar with the appropriate scientific methodologies used in performing valid accident reconstructions. *Id.* (McCort Dec. ¶ 4). Because it is impossible to recreate exactly all of the facts and circumstances of any accident without drawing inferences, deductive and inductive reasoning are necessary tools in performing any accident reconstruction analysis. *Id.* at 2 (McCort Dec. ¶ 5). Specifically, accident reconstruction often involves "ruling out" that a particular event occurred in a crash sequence by analyzing available information, evidence and data. *Id.* (McCort Dec. ¶ 6).

Plaintiffs retained him to reconstruct the accident at issue in this case. *Id.* (McCort Dec. ¶ 7). In doing that, he traveled to the crash site and performed extensive measurements, collected evidence, and analyzed specific features of the intersection where the collision occurred. *Id.*; *see also* Exhibit C, App. to Defendants' Motion at pp. 28-30. He also obtained the investigative materials collected by local law enforcement as a part of their investigation, and inspected the Kia Soul that was involved in the collision, as well as an undamaged Kia Soul that was used to obtain exemplar measurements. Exhibit A, App. at p. 2 (McCort Dec. ¶ 7); *see also* Exhibit C, App. to Defendants' Motion at pp. 28-30. These methods are commonly used by others who perform accident reconstruction and are consistent with the investigation performed by defendants' experts in this case. Exhibit A, App. at p. 2 (McCort Dec. ¶ 7).

The fuel tank of the Kia Soul is mounted directly to the body of the vehicle. *Id.* (McCort Dec. ¶ 9). Therefore, in order for the fuel tank to be in a position to hit the sign post base that ruptured it, one of two things necessarily had to occur: either (1) the entire vehicle lost ground clearance during the crash, or (2) the fuel tank itself was deformed downward as a part of the crash sequence. *Id.*

To figure out how the fuel tank hit the sign base that ruptured it, McCort analyzed whether the vehicle as a whole, rather than just the fuel tank, dropped sufficiently to allow the tank to contact the sign post base. *Id.* at p.3 (McCort Dec. ¶ 10); *see also* Exhibit C, App. to Defendants' Motion at pp. 34-38. Importantly, McCort could not analyze the fuel tank in isolation because there is no generally-accepted way to do this reliably. Exhibit A, App. at p. 3 (McCort Dec. ¶ 10). As a part of this analysis, McCort conducted simulations on numerous vehicle configurations incorporating the different kinds of damage that may have been sustained by the Kia Soul during the crash sequence. *Id.*; *see also* Exhibit C, App. to Defendants' Motion

at pp. 34-38. In all of these simulations, the analysis shows that the body of the Kia Soul could not possibly have dropped sufficiently to allow the fuel tank of the vehicle to be in a position to make contact with the sign post base. Exhibit A, App. at p. 3 (McCort Dec. ¶ 10-11); *see also* Exhibit C, App. to Defendants' Motion at pp. 36-38.

Therefore, after ruling out that the body of the vehicle dropped sufficiently to contact the sign post base, McCort concluded the only remaining possibility is that the gas tank itself moved downward. Exhibit A, App. at p. 3 (McCort Dec. ¶ 12); *see also* Exhibit C, App. to Defendants' Motion at pp. 36-38. Moreover, the movement of the tank during the crash event is supported by the physical evidence as well, such as the bent mounting brackets for the fuel tank. Exhibit A, App. at p. 3 (McCort Dec. ¶ 12). This is consistent with Kia's own testing, which shows that the tank displaces downward several inches during normal acceleration and deceleration events. *Id.*

Thus, like any engineer reconstructing an automobile accident, McCort used materials and methods that are generally accepted in the industry for this purpose. In arriving at the opinions in his report, McCort drew some inferences from the evidence he analyzed and the simulations he ran, including "ruling in" the downward movement of the fuel tank by eliminating the other possible explanations regarding how this fuel tank could have been in the position it was when it was torn open. *Id.* (McCort Dec. ¶ 13). Crucially, the specific methodology McCort used in ruling in the movement of the fuel tank is widely accepted in accident reconstruction analysis, and it has long been subject to the scrutiny of engineers across the country who reconstruct accidents. *Id.*

III. THIS COURT SHOULD REJECT EACH OF KIA'S ARGUMENTS CHALLENGING MCCORT'S OPINION ABOUT THE MOVEMENT OF THE FUEL TANK

Kia doesn't take issue with any of McCort's expert qualifications, and it doesn't challenge most of the opinions McCort lays out in his report. The only thing Kia wants the Court

to prevent McCort from telling the jury is that the fuel tank had to have moved down before the sign base ruptured it. Kia makes three different arguments for excluding this conclusion.

Importantly, "*Daubert*'s list of specific factors neither necessarily nor exclusively applies to all experts or in every case." *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 140 (1999) (citing *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993)). "[W]hether *Daubert*'s specific factors are, or are not, reasonable measures of reliability in a particular case is a matter that the law grants the trial judge broad latitude to determine." *Kumho Tire* at 153.

Necessarily, the focus must be on the principles and methodologies on which the expert's opinion is based, *and not on the merits of the expert's conclusions*. *Daubert*, 509 U.S. at 594–595 n. 12; *United States v. Bonds*, 12 F.3d 540, 556 (6th Cir.1993) (district courts "are not to be concerned with the reliability of the conclusions generated by valid methods, principles and reasoning.").

The three arguments Kia makes are all attacks on the merits of McCort's conclusion that the fuel tank moved downward. The Court should reject each of these arguments, and it should deny Kia's motion in its entirety.

A. McCort Concluded That The Fuel Tank Displaced Downward Based On A Reliable Analysis of Physical Evidence

Kia first attacks McCort's conclusion as "unreliable because he has offered no facts or data to support this speculative theory." Motion at 13. The bulk of this attack consists of the assertion that McCort "has provided no facts or physical evidence connecting his theory to the particular facts of this case." Motion at 14; *see generally* Motion at 14-15.

This argument mischaracterizes both McCort's conclusion and his testimony about it. Initially, as Kia squarely admits, "Both parties agree that a yield sign's rigidly anchored pipe and base cut through the Soul's fuel tank and that, under normal circumstances, the bottom of the

fuel tank would not have overlapped with the top of the sign base." Motion at 2. There is, thus, physical evidence of the fuel tank rupture that neither party disputes; nor does Kia contend that McCort didn't look at it.

Kia also suggests that McCort lacks "physical evidence of the movement" of the fuel tank. Motion at 14. But that suggestion is at odds with both McCort's report and his testimony. The following exchange from McCort's deposition (and the photos from his report) show that McCort reached his conclusion from examining the physical evidence of the mounting brackets of the fuel tank, as well as considering the impact of the Soul with a traffic signal light pole before running over the sign base:

> Q. ...[S]how me your best photograph of the damage to the mounting hardware or the bracket as you say that is bent for the fuel tank.
>
> ***
>
> A. There's a lot of photos buried in there but if I can point you to Exhibits 109 to 112, that was kind of the idea of those exhibits is to try and show that deformation.
>
> Q. What are you trying to convey through 109 through 112?
>
> A. If you look at 112, there's some green highlighting that's outlining the aft mounts for the fuel tank and you can see those two brackets look different. One of them is bent and crumpled up. The other one, I think, is also bent if you compare it to exemplar, but not as much. So my point is simply to suggest that nothing can happen up there is not correct. Something did happen up there. These things bent. And if they bent once, they could have bent another time.
>
> Q. And -- but that bending could be in conjunction with the slip base interacting with the fuel tank?
>
> A. I agree, and I think it probably is. What I'm saying is something has caused that fuel tank to go down and then something caused it to go right back up and it's not exactly where it was, but it's fairly close. So what I'm saying to you is when you bend metal and you bend it back, you can't tell how far you bent it

> unless there's -- unless you break it or you bend it back and forth a bunch of times. And I wasn't, you know, I wasn't asked to do that. I mean, that really gets into a level of detail that is beyond accident reconstruction.
>
> Q. So if the bending of the aft fuel tank mounts is associated with the slip base actually interacting with the fuel tank and bending them back, quote, unquote, up, what is it that would have ever brought the fuel tank down? Are you just postulating if it's moved back up, it may have moved down originally?
>
> A. I think the obvious candidate is that pole impact. So you hit that left rear corner, you buckle the suspension beam that we talked about. There's no reason to believe that you wouldn't bend a lot of other materials back there, up to and including some of these crossbeams that you can see. They're not really beams, but part of the unibody construction that are up underneath that. I don't know if you can see that in my figure.
>
> Q. Which figure are you researching?
>
> A. I'm looking at 110, but it's really shown in all four of these figures, 109 to 112.
>
> Q. And how wide is the engagement of the slip base into the fuel tank?
>
> A. It's roughly the width of the slip base. I've got a photo in here somewhere showing a tape measure held to it, but I don't think it's exactly the dimension, but it's pretty close.

Exhibit B, App. at pp. 5-9 (McCort Dep. 172:20-175:3); *see also* Exhibit A, App. at p. 3 (McCort Dec. ¶ 12). Thus, Kia's assertion that McCort "has provided no facts or physical evidence connecting his theory to the particular facts of this case" is baseless.

Moreover, Kia's suggestion that McCort lacks "physical evidence of the movement" of the fuel tank is a red herring. Kia's own testing shows that the fuel tank displaces downward by several inches during normal acceleration and deceleration events even without any collision-related damage. Exhibit A, App. at p. 3 (McCort Dec. ¶ 12). The bent mounting brackets of the

Soul in this case are perfectly consistent, as McCort testifies, with downward displacement. *See id.* & Exhibit B, App. at pp. 5-9 (McCort Dep. 172:20-175:3).

Kia also faults McCort for "an analytical gap in his downward tank-displacement opinions, making his methodology unreliable" because he ostensibly did not "rule[] tank displacement in as a theory in the first place" by "reliably plac[ing] his downward tank-displacement theory on his differential diagnosis checklist before isolating it as the last-standing scenario". Motion at 13. The Court could reject this summarily as a purely semantic quibble, as McCort – like anyone concluding in any context that the lack of other plausible explanations leaves only one – necessarily "ruled in" his conclusion about the fuel tank's downward movement as part of his analysis. Exhibit A, App. at p. 3 (McCort Dec. ¶ 13). Kia took the very first two sentences of McCort's answer to the deposition question "What is it that you say caused that tank to move?" out of the context of the rest of his detailed answer, and equated that with McCort making an impermissible leap in logic. *Compare* Motion at 13 & n.31 (citing Exhibit B, App. to Defendants' Motion at p. 22 (McCort Dep. 168:9-15)) *with* Exhibit B, App. to Defendants' Motion at pp. 22-23 (McCort Dep. 168:13-169:3); *see also* Exhibit B, App. at pp. 5-9 (McCort Dep. 172:20-175:3). McCort's consideration of all the physical evidence and running several configurations ruling out the possibility that the sign base could have ruptured the fuel tank in any of them obviously means he "ruled in" downward displacement, consistent with how engineers routinely reconstruct accidents. McCort Dec. ¶ 13.

As well, the lone case Kia cites as support for its argument illustrates perfectly why the argument fails. *See* Motion at 13 (citing *Caraker v. Sandoz Pharm. Corp.*, 172 F. Supp. 2d 1046 (S.D. Ill. 2001)). In *Caraker*, the district court did not permit two doctors to testify that a drug called Parlodel caused the plaintiff to suffer a cerebral hemorrhage – but not because the doctors

flubbed the "ruling in" step, in Kia's parlance, "because they did not reliably place their Parlodel theory on their differential diagnosis checklist before isolating it as the last-standing scenario." *Compare Caraker*, 172 F. Supp. 2d at 1047-49 *with* Motion at 13. Rather, the district court determined that the doctors used suspect data to extrapolate their conclusions (which the court explained in great detail), such that they could never reliably "rule in" Parlodel as the cause of the hemorrhage in the first instance. *Id.* at 1049-53.

In contrast, Kia neither demonstrates nor even asserts that McCort could not reliably conclude that the fuel tank displaced downward based on his analysis of the facts, evidence, and data available to him. *See generally* Motion. Thus, Kia implicitly admits that the downward movement of the fuel tank is a perfectly reliable conclusion for McCort to have drawn based on the evidence he analyzed.

In sum, Kia's ostensible challenge to the reliability of McCort's testimony about fuel tank displacement "because he has offered no facts or data to support this speculative theory" mischaracterizes his report and testimony, and is an otherwise untenable attack on a conclusion based on valid, generally-accepted reasoning and physical evidence. *See Bonds*, 12 F.3d 540, 556. The Court should reject Kia's argument accordingly.

B. McCort appropriately analyzed whether the vehicle as a whole dropped sufficiently to allow the fuel tank to contact the sign base

Kia's second attack is that "McCort's proposed downward tank-displacement opinions and related testimony is unreliable because his theory has not been tested." Motion at 15. But Kia does not show that McCort employed any specific untested methodology in reconstructing the accident. *See generally* Motion at 15-17. Rather, Kia faults McCort only for not running a simulation that isolated the effect of the Soul's impact with the traffic light pole on the fuel tank,

which (according to Kia) makes McCort's conclusion an "untested hypothesis." Motion at 16; *see generally* Motion at 15-17.

Kia's second attack is merely a straw man argument. As McCort explains, he intentionally analyzed whether the Soul *as a whole*, rather than just the fuel tank, dropped sufficiently to allow the tank to contact the sign base. Exhibit A, App. at p. 3 (McCort Dec. ¶ 10). Contrary to what Kia claims he should have done, McCort could not analyze the fuel tank in isolation because there is no generally-accepted way to do this reliably. *Id.*

Kia's criticism of McCort is therefore without merit. Neither he nor any engineer could have reliably done what Kia faults McCort for failing to do; indeed, had he attempted to isolate the effect on the fuel tank of a Soul crashing into a light pole, McCort would not have been using a reliable methodology. But because McCort only analyzed the vehicle as a whole, he used a generally-accepted methodology that Kia's expert also used and that Kia does not dispute is reliable. Kia's argument falls flat.

C. McCort's methodology is generally accepted

Kia's third and last attack is that McCort's conclusion "is unreliable because his theory has subject [sic] to peer review and publication or general acceptance." Motion at 17. Kia's argument in support of this is conclusory: without giving even a single example supporting its claim that any aspect of McCort's methodology is not generally accepted, Kia says "McCort should not be permitted to waltz into this courtroom and render unsupported opinions directly relating to plaintiffs' alleged defect theory." Motion at 18.

As set forth in great detail above, all of McCort's opinions – the bulk of which Kia does not contest – are supported by all the material he reviewed, and, crucially, by a widely-accepted methodology used across the country by engineers who reconstruct accidents. Exhibit A, App. at p. 3 (McCort Dec. ¶ 13). This includes the reasonable and reliable conclusion McCort reached

only after performing a methodologically sound analysis that the Soul's fuel tank moved downward before hitting the base of the yield sign. There is no basis for Kia's third attack, and the Court should reject it accordingly.

IV. CONCLUSION

While Kia desperately does not want McCort to tell the jury that the Soul's fuel tank displaced downward before contacting the sign base that ruptured it, Kia fails to show the Court even a single valid criticism of any aspect of McCort's application of the accident reconstruction methodology he used in reaching this conclusion. This methodology is generally accepted in the field of accident reconstruction, and McCort applied it reliably. Kia fails to advance anything other than unavailing and conclusory attacks on the merits of McCort's conclusion about the movement of the fuel tank, and the Court should therefore deny Kia's Motion in its entirety.

DATED this 22nd day of May, 2015

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document has been forwarded to all known counsel of record in this cause in accordance with the Federal Rules of Civil Procedure on this 22nd day of May, 2015.

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